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USDA's Detector Dogs:

Protecting American Agriculture

United States Department of Agriculture
Animal and Plant Health Inspection Service
Miscellaneous Publication No. 1539

APHIS uses detector dogs to augment its force of officers and x-ray machines searching for agricultura

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ontraband in international arrival areas at major U.S. ports of entry.

Agriculture, one of America's biggest industries and largest employers, is under constant threat of attack from foreign animal and plant pests and diseases. The U.S. Department of Agriculture (USDA) has many ways of safeguarding American agriculture. USDA's Animal and Plant Health Inspection Service (APHIS) leads the way in anticipating and responding to issues involving animal and plant health, conflicts with wildlife, environmental stewardship, and animal well-being.

Together with the rest of USDA, customers, and stakeholders, APHIS promotes the health of animal and plant resources to facilitate movement of such resources in the global marketplace and to ensure an abundance of agricultural products and services for U.S. consumers. APHIS brings food to your table, stimulates the global economy, safeguards agricultural resources, and protects and enhances ecosystems. In short, when America sits down for dinner, APHIS helps set the table.

USDA's Beagle Brigade is one facet of APHIS' comprehensive agricultural quarantine and inspection (AQI) program. The Beagle Brigade is a group of nonaggressive detector dogs and their human partners. They search travelers' luggage for prohibited fruits, plants, and meat that could harbor harmful plant and animal pests and diseases. These detector dogs work with APHIS inspectors and x-ray technology to prevent the entry of prohibited agricultural items. The Beagle Brigade teams also serve as goodwill ambassadors by educating the public about USDA; they appear in many places like schools, fairs, and in the news media.

The AQI program helps to prevent the introduction of harmful plant and animal pests and diseases into the U.S. ecosystem—pests and diseases that could threaten the abundance and variety of the food supply and cost U.S. taxpayers millions to eradicate.

The AQI Program at Airports

With increases in international travel that are expected to continue into the next century, there are mounting threats to America's agricultural industry. In 1984, 27 million people traveled to the United States; in 1997, more than twice that number, 66 million, are expected. In addition, there are millions and millions of pieces of international mail and countless commercial import and export shipments. As part of the APHIS program, Plant Protection and Quarantine (PPQ) officers inspect passenger baggage, mail, and cargo in the Federal Inspection Service (FIS) areas at all U.S. ports of entry. Beagles are used at airports as detector dogs. The Beagle Brigade—which includes the detector dogs and PPQ officers serving as canine handlers—generally works among passengers as they claim their bags.

On average, APHIS PPQ officers make about 2 million interceptions of illegal agricultural products every year. Included in that total are more than 275,000 lots of unauthorized meat and animal byproducts that have the potential to carry diseases to American livestock and poultry. Inspectors also find nearly 58,000 plant pests and diseases that could have been dangerous to our agricultural industry. The Beagle Brigade program averages around 75,000 seizures of prohibited agricultural products a year.

Some of the busiest FIS areas are at major international airports in large U.S. cities like New York, Miami, Dallas, and Los Angeles, and it is in airports such as these that the Beagle Brigade usually works. In the FIS area, APHIS officers work alongside officers from the U.S. Customs Service (Customs), the U.S. Fish and Wildlife Service, the U.S. Public Health Service, and the U.S. Immigration and Naturalization Service (INS). All these Federal agencies have various missions and work together to protect people by enforcing laws and facilitating the entry of passengers and goods.

***Many agricultural** products are prohibited entry because they can contain foreign animal and plant pests and diseases that could damage U.S. agriculture.*

Why Beagles?

***Jackpot I was one** of the Beagle Brigade's first and best known detector dogs. He is pictured with a day's worth of contraband from John F. Kennedy International Airport, NY.*

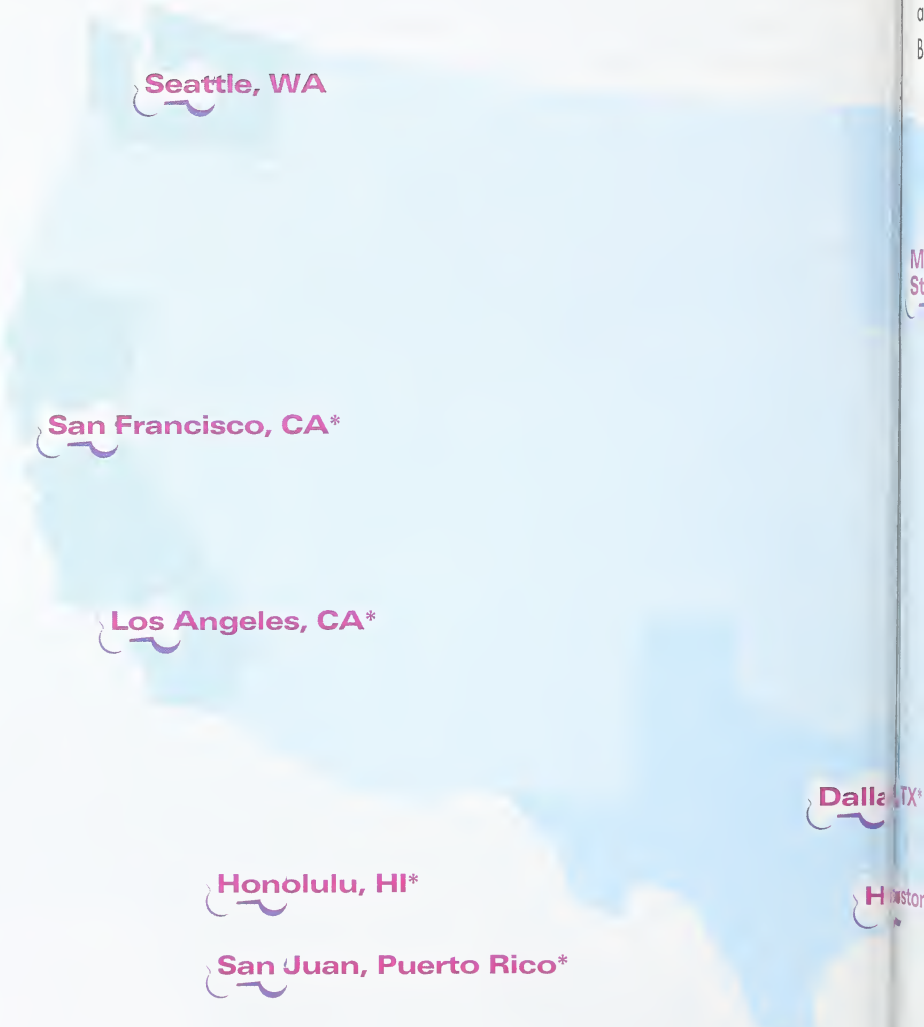
APHIS selected beagles for use at airports because of their acute sense of smell and their gentle nature with people. Beagles' natural love of food makes them effective detectives and happy to work for treats. APHIS has found that most beagles will remain calm in crowded, noisy locations, such as busy airport baggage-claim areas. These detector dogs are bright, inquisitive, and active hounds whose sense of smell makes them curious wanderers by nature. Beagles have such precisely sensitive scenting ability that they can detect and identify smells so faint or diluted that even high-tech scientific equipment could not measure them.

As a species, dogs have noses that are remarkably well built for sniffing or smelling. Dogs' nasal passages are designed to receive and trap odors; the scent nerves are comparatively large and numerous. The smelling ability of human beings is not highly developed. People have an estimated 5 million scent receptors (cells used for smelling) concentrated in a relatively small area at the back of the nose. By comparison, beagles have an estimated 220 million scent receptors. Not only do beagles have a marvelous ability to detect scents, but after extensive training, they are good at distinguishing one odor from another and remembering it. The part of a dog's brain that receives messages from the nerves of the nose is highly developed and can store scent information the way a computer does. You might have noticed that, at a distance, a dog sometimes cannot recognize people or other dogs it knows until it gets within range to identify them by scent.

Beagles are among the healthiest of all dog breeds. They are considered the "Eagle Scouts" of dogs. Loyal, courageous, obedient, and patient, beagles travel well and are equally at home indoors and outdoors. Because of their curiosity, intelligence, high response to food, and superior sense of smell, beagles emerged as the obvious choice to be used for APHIS' detective work.

Background photo:
***Prohibited agricultural** products are confiscated from passengers, inspected, and safely destroyed in grinders or incinerators.*

Beagles may have first come to the United States from England in 1880, and America's National Beagle Club was formed in 1887. About 100 years later, around 1984, USDA established its detector dog program at Los Angeles International Airport with one team consisting of a beagle and a canine handler. At first, APHIS tried a variety of dog breeds and worked with Customs to develop a detector dog program. Then, after selecting beagles as the agency's detector dogs, APHIS worked with the military at Lackland Air Force Base in Texas to train Beagle Brigade teams. Around 1987, APHIS opened three regional training centers and began training its own teams.



Now the Beagle Brigade has more than 50 teams at 21 international airports, with more teams being added regularly. The Beagle Brigade spans the United States. USDA has teams stationed at 19 of the 20 busiest international airports. Plans are now being made to launch a detector dog program on the U.S.–Mexican border and to expand use of detector dogs in postal facilities. The implementation of these plans will be made possible by the opening of USDA's National Detector Dog Training Center in Orlando, FL, in early 1997.

APHIS has also provided expertise and training to agriculture officials in other countries who want to start their own detector dog programs. Canada, Australia, New Zealand, Guatemala, Mexico, and South Korea have all sought the assistance of USDA's Beagle Brigade and APHIS officials.

*Denotes the presence of more than one Beagle Brigade team.

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Beagle Brigade Membership and Training

All canine candidates for the Beagle Brigade are donated by private owners and breeders or selected from animal shelters. Many of APHIS' canine "employees" would have otherwise been euthanized. Trainers first evaluate a dog for its soundness of temperament. If the dog fails the initial evaluation or if the candidate is dropped out of the training course for any reason, APHIS finds the animal a good home. Dogs are never returned to animal shelters.

To determine whether an airport could use a Beagle Brigade team or teams, APHIS personnel perform a feasibility test to check out the airport's environment, work load, and types of flights. Once the agency decides to place a Beagle Brigade team in a location, a dog and a human handler are sought.

***Beagles are** first trained on basic scents like beef and citrus. During their careers, some dogs learn nearly 50 different odors.*

Teams screen passengers in an area that allows maximum exposure to baggage. The detector dogs are trained to sniff the baggage of international passengers as they proceed through FIS areas. When a dog sniffs prohibited agricultural items in a passenger's luggage or packages, it sits to alert its human partner. The PPQ canine officer then checks the passenger's bags, confiscates any prohibited items, and gives the dog a food reward.

Beagles and their handlers go through the bulk of the startup training together. In 8 to 12 weeks of training, trainers teach the dogs to respond passively by sitting when they smell the scents of citrus fruit, mango, apple, beef, or pork; this behavior alerts their handlers to the possible presence of a prohibited item. Dogs receive food rewards for desired responses. At the end of training, the Beagle Brigade teams are transferred to their duty stations and spend at least a week with a trainer onsite.

Working Beagle Brigade dogs wear distinctive green jackets with "Protecting American Agriculture" on one side and "Agriculture's Beagle Brigade" on the other. After 6 months to 1 year of experience,

beagles sniff out prohibited material correctly 80 percent of the time. Their success rate rises to about 90 percent after 2 years' experience. PPQ canine officers continue to train their partners in new odors throughout their career. Some beagles have been known to recognize nearly 50 odors during their 6- to 10- year career.

When working a flight, the dog and the canine officer roam the FIS area. Each piece of luggage is sniffed. When the dog recognizes an odor, it sits as close to the source of the odor as possible, whether it's something on the passenger or something in their luggage. The officer then asks the passenger whether he or she is carrying agricultural products like food, fruit, meat, or other prohibited items and then examines the Customs declaration card to see if any items are declared. The bag in question is inspected if possible. A notation is put on the Customs declaration card in green ink so the passenger's baggage will be inspected by a PPQ officer before the passenger leaves the FIS area. If "yes" is checked on the declaration card in response to inquiries about carrying food or other agricultural items and a prohibited item is found, the item is confiscated but no civil penalty (fine) is levied. If the response is "no" and contraband is found, the passenger may be fined up to $250 on the spot.

The Beagle Brigade *uses passive-response training. The dogs are trained to sit when they sniff agricultural contraband.*

USDA's National Detector Dog Training Center

In early 1997, the three regional detector dog training centers—in Miami, in San Francisco, and at John F. Kennedy International Airport in New York—will be merged into the new USDA National Detector Dog Training Center located in Orlando, FL. PPQ canine officers and beagles will complete basic training at the national training center and then be deployed to their duty stations. More advanced training and training for other countries will also be performed at the training center. The mission of USDA's National Detector Dog Training Center is "to operate a center of excellence to train detector dog teams in the protection of American agriculture, to develop and transfer new knowledge, and to provide high-quality service to its customers."

The center will be located on almost 2 acres of land with the buildings occupying 7,800 square feet. Included will be kennels for 30 dogs, 5 quarantine runs, postal and passenger training areas, and classrooms. The center will also have 24-hour fire and break-in monitoring and a fire sprinkler system. Initial plans are to have three full-time trainers and a coordinator onsite, as well as support personnel to help care for the office and dogs.

A Dog's Life

Because of their sensitivity to the smell of food, Beagle Brigade dogs live in kennels, not at home with their human partners. A typical workday may include some combination of commuting to and from the airport, sniffing the baggage of international travelers entering the United States, conducting a demonstration at a school, and visiting the veterinarian. Beagle Brigade dogs are fed a high-protein diet and rest for at least 20 minutes of each work hour.

APHIS' canine officers *reward their partners with a food treat. Though all beagles are fed a balanced diet, they never get tired of treats.*

A PPQ canine officer develops a close relationship with his or her dog and is aware of even minor changes in its behavior. USDA's detector dogs must be happy on and off the job to be successful. APHIS prefers to find kennels that have indoor and outdoor kennel runs, 24-hour access, high standards of maintenance and hygiene, good security, and a veterinarian on call. Onsite grooming facilities are another plus. The dogs receive complete health exams twice a year in addition to routine veterinary care. The quality of life for the team is important. The dogs are not really working—for them the day is

full of games, love, and rewards. PPQ canine officers work not just with partners but also with good friends.

Typically, a Beagle Brigade dog's career spans about 6–10 years. If a beagle loses long-term interest in working or seems more timid or tired than normal, it may be time for retirement. When a dog is retired, its last partner usually keeps the dog as a pet. If the PPQ officer does not keep the dog, APHIS finds another suitable home. There is generally a list of people waiting to adopt a beagle.

Teamwork is important in the Beagle Brigade. PPQ canine officers are responsible for conducting continuing training programs for their detector dogs as well as for the general well-being of the dog on and off the job. The canine officer completes required data-gathering procedures and submits appropriate reports. The Beagle Brigade is also part of the larger APHIS team that protects American agriculture. The PPQ canine officers are expected to play an active role organizing opportunities to get the larger APHIS message out to the public.

Beagle Brigade teams *are often called upon to educate people about USDA and its role in protecting American agriculture.*

Public Outreach

In addition to their important detection work, Beagle Brigade teams help teach people about agriculture and the missions of USDA. The detector dog program's special role in protecting American agriculture and its public appeal makes it an ideal program, with dogs that perform a service rather than serve as mascots, for public outreach activities. Each team is made up of a qualified PPQ officer and a uniformed beagle, which provides both a spokesperson and an appealing symbol in one package. Because the Beagle Brigade is an actual working program and not a representative character like Woodsy Owl, it already enjoys a high level of visibility at many locations. The teams' daily interaction with international travelers in searching for prohibited agricultural products only serves to increase their recognition.

Traditionally, dogs have been associated with the idea of protecting homes, livestock, or families. By protecting American agriculture

and serving as goodwill ambassadors, the Beagle Brigade builds on this unique relationship between humans and dogs.

The Beagle Brigade has been recognized twice by the Port Authority of New York and New Jersey as airport ambassadors for outstanding customer service. The Pedigree All Star Hall of Fame inducted USDA's Beagle Brigade into the National Dog Museum in St. Louis, MO, as the outstanding service program in 1993. Several organizations have recognized the Beagle Brigade for its work in rescuing dogs and giving them a second chance.

The New York Times, USA Today, CNN, Nickelodeon, Dateline NBC, Telemundo network, and the Christian Science Monitor, among countless other local and national media outlets, have done stories featuring the Beagle Brigade. PPQ canine officers and their partners have given thousands and thousands of demonstrations to audiences of all ages. The teams especially like to go back to school and teach students about agriculture. Snoopy is not the only beagle who is a celebrity. At an event, school, interview, or fair, the Beagle Brigade is always ready to greet people with happy faces and wagging tails.

Other APHIS Dog Programs

APHIS primarily uses beagles for working in airports but uses other dogs for different jobs. Most of the detector dogs that APHIS uses to work in the main distribution centers for international mail are larger breeds. The reason is that postal dogs usually have to climb and search on the large conveyor belts that the mail passes through, and some smaller dogs are not suited for that work. Postal detector dogs alert inspectors to suspicious parcels, and the inspectors pull those parcels off the belts for inspection. APHIS is currently conducting a pilot project along the U.S. border with Mexico in Texas to determine if detector dogs can help our officers check cars and buses for contraband agricultural products.

Different dogs *are suited to perform different jobs based on their natural instincts and training. These Akbash dogs, a popular livestock-guarding breed, are protecting sheep from predators.*

Another program in APHIS, Animal Damage Control (ADC), has a detector dog program in cooperation with the Department of Defense. The dogs in this

In spite *of their formal uniforms, the dogs are not really working—for them, the day is full of games, love, and rewards.*

program, usually terriers, are trained to sniff for brown tree snakes in aircraft, vehicles, household goods, and ships leaving Guam for snake-free areas like Hawaii, the Mariana Islands, and Saipan. Brown tree snakes have infested the island of Guam, causing the extinction of several native species of birds. To protect the rare flora and fauna in Hawaii, it is important to avoid accidentally introducing this destructive pest into the environment. Currently, eight detector dog teams prowl the airstrips and piers of Guam searching out hitchhiker snakes. One of PPQ's Beagle Brigade trainers provides the training to ADC employees for this program. ADC also provides information, guidance, and expertise to ranchers interested in using livestock-guarding dogs, which can be trained to protect sheep from predators. ADC has several livestock-guarding dog experts on staff and can provide detailed printed material that outlines how to set up a livestock-guarding program. These various APHIS programs illustrate that different kinds of dogs are best suited to do different types of jobs.

Other Working Dogs

Some Federal agencies outside USDA also use detector dogs for a variety of tasks. The Central Intelligence Agency, U.S. Postal Service, Secret Service, Federal Bureau of Investigation, Drug Enforcement Administration, State Department, U.S. Marshal's Service, and Bureau of Alcohol, Tobacco, and Firearms all either have their own detector dogs or use teams that belong to other agencies. During emergencies and natural disasters, search-and-rescue dog teams help locate survivors and victims. There are also a variety of State detector dog programs and, of course, military and police dogs. Among other items, detector dogs have been trained to find gypsy-moth egg masses, termites, gas pipeline leaks, drowning victims in less than 10 feet of water, and shrink-wrapped currency. Seizure numbers from just the dogs and their human partners in Federal service run high into the tens of thousands per year.

In and around airports and land border ports, the Federal Aviation Administration (FAA), INS, and Customs all use dog teams.

FAA started a K-9 Explosives Detection program in 1972. Currently, FAA has about 100 explosives-detection teams at strategically located airports throughout the United States. INS uses dogs to look for stowaways and drugs; it has about 140 teams in 17 geographic sectors.

Different dogs are selected for different jobs depending on their natural skills, instincts, and temperament. A wide variety of training methods and rewards are used in detector dog programs as well.

The dog teams that work side-by-side with the Beagle Brigade in passenger arrival areas and baggage ramps are usually Customs detector dogs. These dogs, which sniff for drugs, are trained to work in airports, seaports, and border ports. They screen aircraft, cargo, baggage, mail, ships, and vehicles. An increasing number are trained to work in international arrival areas where passengers claim their bags. When the Customs dogs find drugs, they are rewarded with a rolled towel to roughhouse or play with.

Many detector dog programs, including USDA's Beagle Brigade and Customs, get dogs from animal shelters or rescue leagues. Golden retrievers, German shepherds, Brittany spaniels, German short-hair pointers, and mixed breeds have all been recruited by Customs.

Conclusion

Each day at airports all over the country, international travelers encounter a special forces unit of USDA: the Beagle Brigade. Members of this unit have great noses, sunny dispositions, green jackets, and lots of hair. Beagle Brigade dogs work in teams with PPQ officers in a partnership to protect American agriculture.

The 1,800 or so APHIS inspectors stationed at more than 90 ports of entry make up the first line of protection for the Nation's largest industry, agriculture. The Beagle Brigade teams help detect prohibited agricultural products in passenger baggage and help educate the public about USDA and its mission. Through the inspection process, using innovative programs like the Beagle Brigade, APHIS officers help safegaurd U.S. agriculture, the 2.1 million farms in the United States, and the food budget and nutritional choices of every American consumer.

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To find out more *about the Beagle Brigade, check out the APHIS home page on the Internet at* http://www.aphis.usda.gov. *The map on pages 4 and 5 of this brochure shows the locations that have Beagle Brigade teams. You can call the APHIS PPQ office in those areas to get in touch with the PPQ canine officers. You can also write to Beagle Brigade c/o USDA APHIS Legislative and Public Affairs, Unit 51, 4700 River Rd., Riverdale, MD 20737-1232. Your letters will be forwarded to the appropriate person.*

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